What is claimed is:

1. A voltage booster power supply circuit that generates a voltage for use in a functional block, wherein first and second voltages and a ground voltage are supplied, said second voltage being lower than the first voltage, a timing signal is generated by a timing generator circuit according to said second voltage, a boosted voltage for use in said functional block is generated by boosting said first voltage according to said timing signal.

2. The voltage booster power supply circuit according to claim 1, comprising a detector circuit and a voltage booster circuit, wherein:

said voltage booster circuit comprises a timing generator circuit, a level shifter circuit, and a charge pump circuit;

said timing generator circuit is supplied with said second voltage and outputs a timing signal at a level of said second voltage to said level shifter circuit;

said level shifter circuit outputs a timing signal at a level of said first voltage to said charge pump circuit;

said charge pump circuit is supplied with said first voltage and generates a boosted voltage according to the timing signal at a level of the first voltage; and

said detector circuit detects said boosted voltage to activate said timing generator circuit.

3. The voltage booster power supply circuit according to claim 1, comprising a detector circuit and a voltage booster circuit, wherein

said detector circuit comprises a voltage conversion circuit, a standard voltage generator circuit, and a comparator circuit;

said voltage conversion circuit provides a first standard voltage by decreasing a voltage for use in said functional block;

said standard voltage generator circuit provides a second standard voltage by decreasing said first voltage to a predetermined voltage; and

said comparator circuit compares said first standard voltage with said second standard voltage and, if said first standard voltage is lower than said second standard voltage, activates said voltage booster circuit, or if said first standard voltage is higher than said second standard voltage, deactivates said voltage booster circuit.

4. The voltage booster power supply circuit according to claim 3, wherein said standard voltage generator circuit has a voltage adjustment unit comprising an electric fuse, said voltage adjustment unit being used to adjust said second standard voltage to adjust a voltage for use in said functional block.

5. A voltage booster power supply circuit supplied with first and second voltages and a ground voltage, said second voltage being lower than said first voltage, said

voltage booster circuit boosting said first voltage to produce a voltage for use in a functional block, said voltage booster circuit comprising a detector circuit and voltage booster circuit, wherein

said detector circuit comprises a voltage conversion circuit, a standard voltage generator circuit, a comparator circuit, and a voltage step-down circuit;

said voltage conversion circuit provides a first standard voltage by decreasing a voltage for use in said functional block;

said standard voltage generator circuit provides a second standard voltage by decreasing said first voltage to a predetermined voltage;

said comparator circuit compares said first standard voltage with said second standard voltage and, if said first standard voltage is lower than said second standard voltage, activates said voltage booster circuit, or if said first standard voltage is higher than said second standard voltage, deactivates said voltage booster circuit; and

said voltage step-down circuit decreases the voltage for use in said functional block if the voltage for use in said functional block is higher than a predetermined voltage.

6. The voltage booster power supply circuit according to claim 5, wherein said voltage step-down circuit comprises a transistor, the gate of said transistor is supplied with said second standard voltage, the source of said transistor is connected with a power supply line for

providing a boosted voltage to said functional block, and the drain of said transistor is connected with a power supply line for providing a voltage lower than said first voltage.

7. The voltage booster power supply circuit according to claim 5, wherein

said voltage step-down circuit comprises an operational amplifier and a transistor the gate of which is connected to said operational amplifier;

said first and second standard voltages are inputted into said operational amplifier;

the source of said transistor is connected to a power supply line for providing a boosted voltage to said functional block; and

the drain of said transistor is connected to a power supply line of voltage lower than said first voltage.

8. The voltage booster power supply circuit according to claim 6 or 7, wherein the drain of said transistor is connected to a power supply line of said second voltage.

9. The voltage booster power supply circuit according to claim 6 or 7, wherein the drain of said transistor is connected to a ground voltage line.

10. The voltage booster power supply circuit according to claim 6, wherein said second standard voltage is lower than the boosted voltage provided to said functional block by approximately a threshold voltage of a diode

connected to a load of said voltage conversion circuit in series.

11. The voltage booster power supply circuit according to claim 10, wherein said voltage conversion circuit comprises a transistor and a load, said transistor is a diode-connected transistor, the drain of said transistor is connected to said load, said load is connected to a ground voltage terminal, the source of said transistor is supplied with said boosted voltage, and first standard voltage is outputted from a connection point between the drain of said transistor and said load.

12. The voltage booster power supply circuit according to claim 1, further comprising a charge pump circuit that is driven by a timing signal produced by converting the voltage level of said timing signal to said first voltage level, thereby to generate said boosted voltage, said charge pump circuit comprising a plurality of transistors of which substrate is supplied with a voltage approximately equal to said second voltage.

13. The voltage booster power supply circuit according to claim 1, wherein said first voltage is equal to the voltage of power supply provided to an input/output block by which said functional block provides data to and receives data from an external element.

14. The voltage booster power supply circuit according to claim 1, wherein said second voltage is equal to the

voltage of power supply provided to said functional block.

15. The voltage booster power supply circuit according to claim 1, wherein said functional block comprises a dynamic random access memory.

16. The voltage booster power supply circuit according to claim 2, wherein the thickness of a gate oxide film of a transistor forming said timing generator circuit is thinner than a gate oxide film of a transistor forming said charge pump circuit.

17. A voltage booster power supply circuit that generates a voltage for use in a functional block, wherein first and second voltages and a ground voltage are supplied, said second voltage being lower than said first voltage, a timing signal is generated by a timing generator circuit according to said second voltage, a boosted voltage for use in said functional block is generated by boosting said first voltage according to said timing signal, said voltage booster power supply circuit comprising a detector circuit and a voltage booster circuit, wherein

said voltage booster circuit comprises a timing generator circuit, a level shifter circuit, and a charge pump circuit;

said timing generator circuit is supplied with said second voltage and outputs a timing signal at a level of said second voltage to said level shifter circuit;

said level shifter circuit outputs a timing signal at a level of said first voltage to said charge pump circuit;

said charge pump circuit is supplied with said first voltage and generates a boosted voltage according to the timing signal at a level of the first voltage;

said timing generator circuit comprises an oscillator; and

if said detector circuit detects that output of said boosted voltage is lower than a predetermined voltage, said oscillator and said charge pump circuit are activated and said charge pump circuit is driven before said oscillator steadily generates a clock signal.

18. The voltage booster power supply circuit according to claim 17, wherein

said timing generator circuit comprises a divider circuit; and

if said detector circuit detects that said boosted voltage is lower than the predetermined voltage, said oscillator is activated and at the same time said divider circuit is set, said charge pump is activated before said oscillator steadily generates a clock signal; and

if said detector circuit detects that said boosted voltage exceeds the predetermined voltage, said oscillator is deactivated and said divider is reset.

19. The voltage booster power supply circuit according to claim 18, wherein said divider circuit is formed by a

plurality of D-flip-flops or T-flip-flops having a reset terminal and a set terminal.

20. The voltage booster circuit according to claim 6, wherein said functional block comprises a memory circuit, and a threshold voltage value of said transistor is approximately equal to a voltage threshold of a transistor used in said memory circuit.

21. The voltage booster circuit according to claim 7, wherein said functional block comprises a logic circuit, and a threshold voltage value of said transistor is approximately equal to a voltage threshold value of a transistor that forms said logic circuit.